

Claims

[c1] What is claimed is:

1. A method for driving a liquid crystal display panel, the liquid crystal display panel comprising:

a plurality of scan lines;

a plurality of data lines; and

a plurality of pixels, each pixel has a switching device and a liquid crystal element, and the switching device is connected to the corresponding scan line, the corresponding data line and the liquid crystal element;

the method comprising:

continuously receiving a plurality of frame data;

producing an over-drive data voltage pulse and an original data voltage pulse according to the frame data in every frame period; and

sequentially providing the over-drive data voltage pulse and the original data voltage pulse to the liquid crystal element of the pixel in one frame period via the connected data line.

[c2] 2. The method of claim 1 further comprising:

delaying the frame data to produce a plurality of corresponding delayed frame data; and

deciding a value of the over-drive data voltage pulse by comparing a present frame data with the corresponding delayed frame data.

- [c3] 3. The method of claim 2, wherein when comparing the present frame data with the corresponding delayed frame data, the value of the over-drive data voltage pulse is decided according to a predetermined table.
- [c4] 4. The method of claim 1, wherein each frame data comprises a plurality of pixel data and each pixel data corresponds to one pixel.
- [c5] 5. The method of claim 1 further comprising:
providing a scan voltage to the switching device via the corresponding scan line to enable the over-drive data voltage pulse and the original data voltage pulse to be supplied to the liquid crystal element.
- [c6] 6. A method for driving a liquid crystal display panel, the liquid crystal display panel comprising:
a plurality of scan lines;
a plurality of data lines; and
a plurality of pixels, each pixel includes a switching device and a liquid crystal element, the switching device is connected to the corresponding scan line, the corresponding data line and the liquid crystal element;

the method comprising:

receiving a clock signal, a synchronization signal, and a plurality of frame data;

producing a double-frequency clock signal in accordance with the clock signal, and producing a double-frequency synchronization signal in accordance with the double-frequency clock signal and the synchronization signal;

producing at least an over-drive data voltage pulse and an original data voltage pulse in accordance with the frame data; and

sequentially providing the over-drive data voltage pulse and the original data voltage pulse to the liquid crystal element of the corresponding pixel in accordance with the double-frequency clock signal in one frame period.

[c7] 7. The method of claim 6 further comprising:
delaying the frame data to produce a plurality of corresponding delayed frame data; and
deciding a value of the over-drive data voltage pulse by comparing a present frame data with the corresponding delayed frame data.

[c8] 8. The method of claim 7, wherein when comparing the present frame data with the corresponding delayed frame data, the value of the over-drive data voltage pulse is decided according to a predetermined table.

- [c9] 9. The method of claim 6, wherein the synchronization signal includes a horizontal synchronization signal and a vertical synchronization signal.
- [c10] 10. The method of claim 6, wherein the double-frequency synchronization signal includes a horizontal double-frequency synchronization signal and a vertical double-frequency synchronization signal.
- [c11] 11. The method of claim 6, wherein each frame data comprises a plurality of pixel data and each pixel data corresponds to one pixel.
- [c12] 12. The method of claim 6 further comprising:
providing a scan voltage to the switching device via the corresponding scan line to enable the over-drive data voltage pulse and the original data voltage pulse supplied to the liquid crystal element.